1143-35-231 **Alessandro Arsie*** (alessandro.arsie@utoledo.edu), 2801 W. Bancroft St. Mail Stop 942, Toledo, OH 43606, and **Paolo Lorenzoni**. *Flat F-manifolds, Miura invariants and integrable systems of conservation laws.*

In this talk, I will present the extension to the case of systems of integrable conservation laws of some of the results proved for scalar equations in Arsie, Moro, Lorenzoni (Integrable viscous conservation laws, Nonlinearity 2015) and in Arsie, Moro, Lorenzoni (On Integrable Conservation Laws, Proceedings of the Royal Society A, 2014).

For such systems, I will show that the eigenvalues of a matrix obtained from the quasilinear part of the system are invariants under Miura transformations, and I will highlight how these invariants are related to dispersion relations. Furthermore, focusing on one-parameter families of dispersionless systems of integrable conservation laws associated to the Coxeter groups of rank 2 found in Arsie, Lorenzoni (Complex reflection groups, logarithmic connections and bi-flat F-manifolds, Letters in Math. Physics 2017), I will discuss the corresponding integrable deformations up to order 2 in the deformation parameter ϵ.

Each family contains both bi-Hamiltonian and non-Hamiltonian systems of conservation laws and therefore we use it to probe to which extent the properties of the dispersionless limit impact the nature and the existence of integrable deformations.

These are results of a joint work with Paolo Lorenzoni. (Received August 14, 2018)